

IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-71 (Canceled)

72. (Currently Amended) A purified antibody or functional fragment thereof that binds to an epitope of an antigen expressed by at least one of a neoplastic cell, wherein said neoplastic cell is an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus; a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary or an adenocarcinoma of the uterus, wherein SAM-6 antibody comprising the amino acid sequences of SEQ ID NO:1 and SEQ ID NO:3 specifically binds to said epitope of the antigen expressed by at least one of said neoplastic cells and wherein said antibody or functional fragment thereof comprises a light chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:1 and a heavy chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:3.

73. (Currently Amended) A purified antibody or functional fragment, wherein said antibody or functional fragment specifically binds to an epitope of an antigen expressed by at least one of BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196), or LOU-NH91 (DSMZ Accession No. ACC 393) cells, wherein SAM-6 antibody comprising the amino acid sequences of SEQ ID NO:1 and SEQ ID NO:3 specifically binds to said epitope of the antigen expressed by at least one of said neoplastic cells and wherein said antibody or functional fragment thereof comprises a light chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:1 and a heavy chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:3.

74. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment specifically binds to BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196) or LOU-NH91 (DSMZ Accession No. ACC 393) cells.

75. (Currently Amended) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment specifically binds to an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuse diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, ~~an adenocarcinoma of the esophagus~~, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary or an adenocarcinoma of the uterus.

76. (Previously Presented) The purified antibody or functional fragment according to Claim 72, comprising a functional fragment.

77. (Currently Amended) The purified antibody or functional fragment according to Claim 76, wherein said functional fragment is selected from the group consisting of V_L, V_H, F_v, [[F_c]] Fab, Fab' and F(ab')₂.

78. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 80% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 80% identical to SEQ ID NO:3.

79. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 85% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 85% identical to SEQ ID NO:3.

80. (Previously Presented) The purified antibody or functional fragment according to Claim 72, comprising SEQ ID NO:1 and SEQ ID NO:3.

81. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said functional fragment comprises SEQ ID NO:1 and SEQ ID NO:3.

82. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:1.

83. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:3.

84. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said light chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:1.

85. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said heavy chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:3.

86. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes at least one complementary-determining region (CDR) identical to an amino acid sequence selected from the group consisting of light chain variable region CDRs [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Val-Val (CDR3) of SEQ ID NO:1], and heavy chain variable region CDRs [Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3].

87. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment is a monoclonal antibody.

88. (Previously Presented) The purified antibody or functional fragment according to Claim 72, comprising an amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO:1, and an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:3.

89. (Withdrawn) A cell expressing a polypeptide selected from the group consisting of: said polypeptide comprising an amino acid sequence substantially identical to a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof, and wherein said polypeptide specifically binds to BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196), and LOU-NH91(DSMZ Accession No. ACC 393) cells and not to a non-neoplastic cell;

said polypeptide comprising at least one complementary-determining regions (CDR) or functional fragments thereof comprising an amino acid sequence substantially identical to an amino acid sequence selected from the group consisting of [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Vat-Va1(CDR3) of SEQ ID NO:1], [Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3] and a combination thereof; and,

said polypeptide comprising an amino acid sequence substantially identical to a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof, wherein said polypeptide specifically binds to an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary and an adenocarcinoma of the uterus, and not to a non neoplastic cell.

90. (Withdrawn) A cell expressing a polypeptide comprising a sequence substantially identical to an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof.

91. (Withdrawn) The cell expressing a polypeptide according to Claim 90, wherein said cell is a hybridoma.

92.-94. (Cancel)

95. (Withdrawn) An isolated nucleic acid molecule encoding a heavy or light chain variable region sequence of the antibody of claim 72.

96. (Withdrawn) The isolated nucleic acid molecule according to Claim 95, wherein said nucleic acid molecule is comprised within a vector.

97. (Withdrawn) The isolated nucleic acid molecule according to Claim 96, wherein said vector is comprised within a cell.

98. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a

variable region of a light chain (V_L) at least 90% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

99. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

100. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 80% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 80% identical to SEQ ID NO:3.

101. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 85% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 85% identical to SEQ ID NO:3.

102. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:1.

103. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:3.

104. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 90% identical to SEQ ID NO:3.

105. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a

variable region of a light chain (V_L) at least 90% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

106. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

107. (Previously Presented) The purified antibody or functional fragment according to Claim 73, comprising a functional fragment.

108. (Currently Amended) The purified antibody or functional fragment according to Claim 107, wherein said functional fragment is selected from the group consisting of V_L , V_H , F_v , $[[F_c]]$ Fab, Fab' and $F(ab')_2$.

109. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said light chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:1.

110. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said heavy chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:3.

111. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes at least one complementary-determining region (CDR) identical to an amino acid sequence selected from the group consisting of light chain variable region CDRs [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Val-Val (CDR3) of SEQ ID NO:1], and heavy chain variable region CDRs [Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3].

112. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment is a monoclonal antibody.

113. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment inhibits cell proliferation of 23132/87 (DSMZ Accession No. ACC 201) cells.

114. (Previously Presented) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment induces apoptosis of at least one of BXPC-3 (ATCC Accession No. CRL-1687) and 23132/87 (DSMZ Accession No. ACC 201) cells.

115. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment inhibits cell proliferation of 23132/87 (DSMZ Accession No. ACC 201) cells.

116. (Previously Presented) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment induces apoptosis of at least one of BXPC-3 (ATCC Accession No. CRL-1687) and 23132/87 (DSMZ Accession No. ACC 201) cells.